

effect wherein degassing is suppressed to the minimum by the HSQ film having its SiH content not less than the threshold. It is believed that the amended claims are in full compliance with 35 USC § 112.

Claims 1-3, 9 and 10 were rejected under 35 USC § 102(e) as being anticipated by Shields.

Favorable reconsideration of this rejection is earnestly solicited.

Claim 1 has been amended to define that a first insulating layer containing SiH covers a conductive film and that a second insulating layer is formed on a first insulating layer.

As noted by the Examiner, Shields discloses an insulating layer containing SiH. However, as apparent from Fig. 5, the HSQ layer is not formed on the metal feature 51. For at least this reason, amended claim 1 is not anticipated by Shields.

In the present invention, the first insulating layer made of a material having a low dielectric constant is provided between conductive layers formed at different levels, thereby preventing a delay of signal transmission in the interconnection layers. In contrast, since the upper surface of the HSQ layer 52 in Shields is at the same level as that of the metal feature 51, the HSQ layer 52 may contribute to the planarization, but can not prevent such a delay in the interconnection layers formed at different levels.

Amended claim 1 further specifies that a second insulating layer is formed on the first insulating layer. The second insulating layer confines steam generated from the first insulating layer and prevents the steam from going to the upper layer.

As described above, the first insulating layer made of a material having a low dielectric constant is formed on a conductive film to prevent a delay in the interconnection layer. The H content of the first insulating layer is controlled to be not less than a predetermined value, so as to considerably reduce the degassing amount from the first insulating layer. Even when gas is

generated, the second insulating layer on the first insulating layer prevents the gas from going to the upper layer. Thus, Shields fails to anticipate amended claims 1 and 3.

In regard to claims 2 and 9, Shields only discloses the SiH content in an HSQ film. Shields does not disclose the claimed threshold set forth in the amended claims.

Claims 4 and 5 were rejected under 35 USC § 103(a) as being unpatentable over Shields in view of Brennan. Favorable reconsideration of this rejection is earnestly solicited.

As noted above, Shields does not teach or suggest the presently claimed threshold. Furthermore, Brennan provides no teaching or suggestion of the claimed threshold.

Claim 5 depends from claim 1. As noted above, claim 1 has been amended to specify a first insulating interlayer and a second insulating interlayer. The combination of Shields and Brennan fails to teach or suggest these features.

Claims 7 and 8 were rejected under 35 USC § 103(a) as being unpatentable over Shields in view of Wollesen. Favorable reconsideration of this rejection is respectfully requested.

Claim 7 has been amended to set forth a threshold, as discussed above. Shields and Wollesen each fail to teach or suggest such a threshold.

Claim 8 has been amended to specify a first insulating layer and a second insulating layer, as discussed above. The cited references fail to teach or suggest these features.

Claim 6 was rejected under 35 USC § 103(a) as being unpatentable over Shields in view of Brennan and further in view of Yu. Favorable reconsideration of this rejection is earnestly solicited.

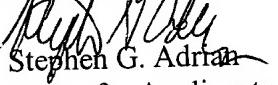
Claim 6 depends from claim 5 which is dependent on claim 1. Yu fails to provide the teachings which Shields and Brennan lack, as discussed above. Accordingly, claim 6 distinguishes over the combination of references.

For at least the foregoing reasons, the claimed invention distinguishes over the cited art and defines patentable subject matter. Favorable reconsideration is earnestly solicited.

Should the Examiner deem that any further action by applicants would be desirable to place the application in condition for allowance, the Examiner is encouraged to telephone applicants' undersigned attorney.

In the event that this paper is not timely filed, applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees which may be due with respect to this paper, may be charged to Deposit Account No. 01-2340.

Respectfully submitted,
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